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Discovery of Perchlorate Contamination Expected to Rise as More Testing Is Done

By William H. Carlile

PHOENIX--Ammonium perchlorate contamination in drinking water supplies has been confirmed in seven states, and "that number is only going to grow" as more testing is conducted, Keith Takata, director of the Environmental Protection Agency Region IX Superfund Division in San Francisco, said Aug. 27.

Meanwhile, assessment surveys are under way to determine what constitutes maximum safe levels of the chemical, commonly known as perchlorate, with findings expected by early 1999, according to Annie Jarabek, of EPA's National Center for Environmental Assessment in Research Triangle Park, N.C.

Takata and Jarabek spoke here at an informational session--one of several conducted in Western states in recent days--sponsored by the Interagency Perchlorate Steering Committee. The committee was formed by EPA, other federal agencies, and state and tribal agencies to address the issue and to seek public input regarding potential hazards caused by the chemical in drinking water supplies.

Perchlorate, a man-made inorganic salt that is used as an oxidizer in fuel for rockets, munitions and fireworks, can interfere with the thyroid gland's ability to produce hormones and regulate the body's metabolism. But it is not known what effect, if any, low levels of the chemical--such as those being detected in some water supplies--have on human or environmental health.

Takata said perchlorate has been manufactured as early as 1890, and was shipped to and, presumably, used in 37 states. Those that already have confirmed sites with perchlorate contamination of ground water are: California, Nevada, Utah, Texas, New York, Maryland, and Arkansas. In California alone, he said, 14 facilities have confirmed perchlorate in ground water.

A third speaker at the conference, Russell Rhoades, director of the Arizona Department of Environmental Quality, said, "We do see its presence occurring in our state." Perchlorate has been detected in water that is transported from the Colorado River to metropolitan Phoenix and Tucson, Ariz., via the Central Arizona Project, a 336-mile-long aqueduct.

Nevada Water Concerns.

Perchlorate has been traced back upstream on the Colorado River to Nevada which, Takata said, has two major perchlorate manufacturing facilities. Ground water that is coming from those facilities, he noted, "is very severely contaminated with perchlorate." The Las Vegas Wash transports the perchlorate contamination into Lake Mead, from which more than 1 million Nevada residents draw their water, Takata said.

Even with "incredible dilution" that occurs in the lake, Takata said, the perchlorate concentrations are very close to the interim drinking water standards of 18 parts per billion used by California and Nevada. The Colorado River water ultimately affects at least 10 Native American tribes as well as Arizona and millions of customers of the Metropolitan Water District in Los Angeles, Takata said.

Takata held out hope, however, saying better science is yielding better detection methods. He also said, "We are moving as fast as we can" to develop cost-effective technologies to treat large volumes of water contaminated by perchlorate.